REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I.   STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-9 are currently pending. Claims 1, 8 and 9 are independent. Claims 1-5 and 8-9 are hereby amended. No new matter has been introduced. Support for this amendment is provided throughout the Specification as originally filed.

Changes to the claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II.   OBJECTIONS TO THE SPECIFICATION

The title of the application was objected to in the Office Action. Applicants have amended the title herein to overcome the objection.

Applicants respectfully request withdrawal of the objection to the specification.

III.   REJECTIONS UNDER 35 U.S.C. §112

Claims 1, 8 and 9 have been amended to overcome the §112 rejection. Applicants note that "concatenation information" is unambiguously defined in the specification:

"It should be noted that the word concatenation information denotes the relation (concatenation or union) of component words of the word sequence representing the ultimate result of speech recognition, and includes the acoustic score and the language score of each word as well as time points of the beginning end and terminal end of the speech portions associated with the respective words." Publ. App. par. [0057].

Phillips v. AWH Corp., 415 F.3d 1303, 1319 (Fed. Cir. 2004) ("Claims are construed in light of the specification, of which they are a part"). *See, also,* MPEP 2101.01 and MPEP 2173.05.

Claims 1-5 and 7-9 have been amended to overcome the §112 rejection noted in the second paragraph on page 3 of the Office Action.

Applicants respectfully request withdrawal of the §112 rejection of claims 1-9.

IV. REJECTIONS UNDER 35 U.S.C. §102 and §103

Claims 1 and 7-8 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,218,668 to Higgins et al. (hereinafter merely "Higgins").

Claim 2 was rejected under 35 U.S.C. §103 as allegedly unpatentable over Higgins in view of U.S. Patent No. 5,963,903 to Hon et al. (hereinafter merely "Hon").

Claim 3 was rejected under 35 U.S.C. §103 as allegedly unpatentable over Higgins in view of Chiang et al. (*"On Jointly Learning the Parameters in a Character-Synchronous Integrated Speech and Language Model,"* 1996) (hereinafter merely "Chiang").

Claims 4 and 9 were rejected under 35 U.S.C. §103 as allegedly unpatentable over Higgins in view of U.S. Patent No. 6,178, 401 to Franz et al. (hereinafter merely "Franz").

Claims 5 and 6 were rejected under 35 U.S.C. §103 as allegedly unpatentable over Higgins in view of U.S. Patent No. 5,960,447 to Holt et al. (hereinafter merely "Holt").

Applicants respectfully traverse this rejection.

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Independent, as amended, claim 1 is representative and recites, *inter alia*:

"a score calculation step of calculating said score of said candidate first and candidate second words selected by said selection step referencing concatenation information of said first and second words;

. . .

wherein the word concatenation information is sequentially updated based on the score."

In the present invention, the acoustic or linguistic score, indicating the result of the matching processing is used to update the word concatenation information. Moreover, based on the word concatenation information the ultimate results of speech recognition are ouput. Pub. App. par. [0052]. The acoustic and language scores are found for each of the selected words, while the word concatenation information is updated, based on the word score. Pub. App. par. [0108].

As noted above, "concatenation information" is unambiguously defined in the specification:

"It should be noted that the word concatenation information denotes the relation (concatenation or union) of component words of the word sequence representing the ultimate result of speech recognition, and includes the acoustic score and the language score of each word as well as time points of the beginning end and terminal end of the speech portions associated with the respective words." Publ. App. par. [0057].

Phillips v. AWH Corp., 415 F.3d 1303, 1319 (Fed. Cir. 2004) ("Claims are construed in light of the specification, of which they are a part"). *See, also*, MPEP 2101.01 and MPEP 2173.05.

Because the word concatenation information is <u>sequentially updated based on the matching score</u>, it is possible for the candidate word selection to perform the processing by exploiting the latest word concatenation information. Publ. App. par. [0113].

Thus, in the present invention, the speech that is to be recognized comprises a plurality of input words by a user. The first and second words are selected from the plurality of words that are part of the input speech to be recognized. The first and second words come from the input speech to be recognized. It is those first and second words from the speech that are analyzed against the databases.

The speech recognition apparatus according to the present invention includes selection means for selecting one or more first words from a group of words to be processed by speech recognition processing, based on a first measure calculated using the characteristic values, and for selecting one or more second words based on a second measure different from the first measure, and score calculation means for calculating the score of the first and second words selected by the selection means. The selection means may select, as the second words, the words having the part of speech satisfying a pre-set condition, with the part of speech as the second measure, for example. Publ. App. par. [0037]-[0040].

The present invention has the advantage that from a set of words in received speech subjected to processing for speech recognition, one or more first candidate words of the received speech are selected on the basis of a first measure calculated using characteristic values, while one or more candidate second words from the received speech are selected on the basis of a second measure different from the first measure. The scores are calculated on the so <u>selected first and second candidate words from the received speech</u>. Thus, the risk of deterioration in the accuracy in speech recognition is reduced due to non-selection of the second words based on the first measure.

The Office Action points to Higgins Col. 6, lines 16-46 and col. 8, line 9 to col. 9, line 65 as disclosing the "concatenation information" recited in claim 1. However, Higgins does not

disclose a definition of "concatenation information" as defined in the present application.

Further, while Higgins uses the word "sequentially," that word is used in the context of

"processing input frames sequentially." There is no disclosure that "concatenation information,

as defined in the present specification, is "sequentially updated based on the score" as recited in

claim 1.

Neither the Hon, Chiang, Franz nor Holt references teach or suggest the element missing

from Higgins as discussed above. Thus, claims 2-6 and 9 are patentable over those references

for at least the same reasons as they are patentable over Higgins.

For reasons similar or somewhat similar to those described above with regard to

independent claim 1, independent claims 8 and 9 are also believed to be patentable.

V. DEPENDENT CLAIMS

The other claims are dependent from one of the claims discussed above and are therefore

believed patentable for at least the same reasons. Because each dependent claim is also deemed

to define an additional aspect of the invention, however, the individual reconsideration of the

patentability of each on its own merits is respectfully requested.

CONCLUSION

Claims 1-9 are in condition for allowance. In the event the Examiner disagrees with any

of statements appearing above with respect to the disclosure in the cited reference, or references,

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it is respectfully requested that the Examiner specifically indicate those portions of the reference, or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

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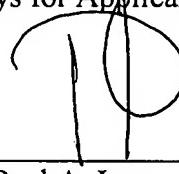
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